

U.S. Patent Application Serial No. **10/543,185**
Amendment filed June 16, 2010
Reply to OA dated March 16, 2010

REMARKS

Claims 1-4, 6, 7 and 10-17 are pending, with claims 1-4 and 10-12 withdrawn from consideration. Claim 6 is amended and claim 18 is newly added herein. Upon entry of this amendment, claims 1-4, 6, 7 and 10-18 will be pending, with claims 1-4 and 10-12 withdrawn. Entry of this amendment and reconsideration of the rejections are respectfully requested.

No new matter has been introduced by this Amendment. Support for the amendments to the claims is detailed below.

Claims 6, 13, and 15-17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Barney in 2002/0110180. (Office action paragraph no. 4)

The Examiner states that Barney discloses a temperature-sensing composition that includes a matrix composition and semiconductor nanocrystals exhibiting fluorescence. The Examiner cites [0018] as disclosing that the quantum efficiency of the nanocrystals can be greater than 20%, and cites [0030] as disclosing that the matrix can be a sol-gel derived matrix. The Examiner cites [0032] for disclosing precursors including hydrolyzable compositions including silicon alkoxide.

The Examiner now states that the term “organoalkoxysilane” is not explicitly defined in the specification, and states that “Barney teaches silicon alkoxides, which read on the claim [sic], since X is defined as simply being an alkoxy group.”

U.S. Patent Application Serial No. 10/543,185
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Reconsideration of the rejection is respectfully requested in view of the clarifying amendment to claim 6. The Examiner appears to be stating that in the General Formula $X-Si(OR)_3$ in claim 6, it is possible for X to be an alkoxy, and that the General Formula in claim 6 would then read on $Si(OR)_4$. In the Response filed February 25, 2010, Applicant argued that in the General Formula $X-Si(OR)_3$, X is **not** an alkoxide, and that group X is attached via a Si-C bond. Applicant cited the specification at page 16, line 10, "at least one of four bonds of silicon is bonded with a carbon atom, " as supporting this definition.

Applicant now, for clarity, amends claim 6 to explicitly clarify that "group X is bonded to Si through a silicon-carbon bond."

Applicant notes that the definition of group X in claim 6 is as follows: "wherein X is a group containing a vinyl group, a group containing an epoxy group, an amino alkyl group, an acryloyl alkyl group, a methacryloyl alkyl group, a mercapto alkyl group or a phenyl group." The recited alkyl groups (amino alkyl group, acryloyl alkyl group, etc.) all are groups bonded to the Si with Si-C bonds.

Moreover, the General Formula $X-Si(OR)_3$ itself implies that X is different from (OR). Group OR is specifically stated to be an alkoxy, and the Markush group for X does not include any alkoxy groups.

Amended claim 6 therefore clarifies that group X refers only to a group bonded through a Si-C bond. By comparison, Barney only discloses silicon alkoxides, in which all four groups bonded

U.S. Patent Application Serial No. **10/543,185**
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to Si are alkoxides (bonded through a Si-O bond). Claim 6, as amended, is therefore not anticipated by and is not obvious over Barney.

Claims 7 and 14 are rejected under 35 U.S.C. §103(a) as being unpatentable over Barney in 2002/0110180 as applied to claim 7 and further in view of Selvan in “Synthesis of tunable, highly luminescent QD-glasses through sol-gel processing”. (Office action paragraph no. 5)

The Examiner states that QD-glasses are known in the prior art, and cites Selvan as disclosing glasses having luminescence, where those glasses are made using alkoxysilanes.

Reconsideration of the rejection is respectfully requested in view of the clarifying amendment to claim 6, reciting that “group X is bonded to Si through a silicon-carbon bond.” As discussed above, Barney only discloses silicon alkoxides, in which all four groups bonded to Si are alkoxides.

The Examiner admits that Selvan also discloses only alkoxysilanes, but has interpreted the General Formula in claim 6 as including the case where X is an alkoxy group. The present amendment to claim 6 clarifies that X cannot be an alkoxy group. Claims 7 and 14, as amended, are therefore not obvious over Barney and Selvan, taken separately or in combination

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Regarding new claim 18.

New claim 18 depends from claim 6, and further limits the Markush group of possible groups
X. Support for this amendment may be found at page 16, line 19, to page 17, line 9, of the
specification.

If, for any reason, it is felt that this application is not now in condition for allowance, the
Examiner is requested to contact the applicants' undersigned agent at the telephone number indicated
below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the applicants respectfully petition for an
appropriate extension of time. Please charge any fees for such an extension of time and any other
fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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